Attorney Docket No.: F1600(V)
Serial No.: 09/800,547
Filed: March 7, 2001
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BRIEF FOR APPELLANTS

Sir:

This is a Brief on Appeal from the Examiner's Final Rejection concerning the above-identified application. The Commissioner is hereby authorized to charge any additional fees, which may be required to our deposit account No. 12-1155, including all required fees under: 37 C.F.R. §1.16; 37 C.F.R. §1.17; 37 C.F.R. §1.18.

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I. REAL PARTY IN INTEREST

The Real Party in Interest in this Appeal is Unilever Bestfoods North America, Division of Conopco, Inc., a corporation of the State of New York.

II. RELATED APPEALS AND INTERFERENCES

Neither the Appellants, their legal representatives nor the Assignee are aware of any other Appeals or Interferences relating to the present Appeal.

III. STATUS OF CLAIMS

This Appeal is taken from the Final Rejection of claims 1, 3,5, 6, 8-11, 13-16, 18-26, 28 and 29, all the pending claims in the application. A copy of the appealed claims is attached to this Brief as an Appendix.

IV. STATUS OF AMENDMENTS

An Amendment after the Final Rejection was filed on July 20, 2006. The Amendment was not entered by the Examiner for purposes of this Appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention set forth in the claims on appeal is directed to a superior process for making an emulsified dressing, either a mayonnaise or salad dressing which can be made in the same production line. The claimed process has a throughput rate as high as about 1,000 pounds per minute and enables final emulsification of the raw material phases with a single pass (i.e. no re-circulation) through the in-line mixer/emulsifier. The diameter of the rotor and stator and gap opening dimension, in addition to variation in motor speed, affects emulsification of the raw ingredients phases and, in part, allows use of the in-line mixer/emulsifier to make a final emulsion on a continuous basis with one pass through the in-line mixer/emulsifier. The inventive process has great flexibility to make a wide variety of spoonable and pourable dressings and requires less equipment than prior to it.

In the Specification, the portion form page 1, line 4 to page 5, line 9 is background. The phraseology used in claim 1 may be found, for example, on page 11 of the Specification as originally filed. Beginning at page 14, line 19, working examples, illustrating the unexpected results and superior properties of the composition of this invention, are put forth.

Independent claim 1 describes a process for making a dressing comprising the steps of:

(a) combining raw ingredients comprising an oil phase and an aqueous phase in a pre-mix tank comprising a means for mixing to form a coarse emulsion [p. 3, l 12-15], and

(b) processing the coarse emulsion in a single pass through an in-line mixer/emulsifier comprising at least one set of stator and rotor, and an adjustable speed motor to drive the rotor, wherein the stator and rotor comprise co-axially engageable rings of

teeth having a plurality of concentric vanes and concentric wells [p. 3, l. 20-22] with generally slanted side walls [p. 4, l. 1] from each vane to each well and the rotor and stator when engaged are such that the concentric vanes of the stator align with the corresponding concentric wells of the rotor and the concentric vanes of the rotor align with the corresponding concentric wells of the stator with the corresponding generally slanted walls of the stator [p. 4, l. 1-5] and rotor aligned and when engaged a gap having an axial opening dimension and slanted opening dimension is defined by each concentric vane and each concentric well [p. 4, l. 5-7] and the aligned slanted walls and the gap is adjustable in increments of about 0.015 inches in axial opening dimension [p. 4, l. 7-9; p. 10, l. 10-12; p. 12, l. 11 ; p. 14, l. 12-14],

wherein said axial opening dimension is about 0.010 inches to about 0.500 inches [p. 10, l. 11-12];

wherein the diameter of the stator and rotor is about 9 inches or more [p. 10, l. 17-18];

wherein the adjustable motor operates at up to about 3,600 rpm [p. 12, l. 1];

said process having a throughput rate of about 100 pounds per minute to about 1,000 pounds per minute [p. 12, l. 8-9];

the dressing being mayonnaise or a salad dressing and an oil phase and an emulsifier phase are raw ingredients combined in the pre-mix tank [p. 18, l. 16-17];

further wherein the mayonnaise and salad dressing are made in the same production line [p. 24, lines 9-10]; and

wherein said dressing comprises about 0.1 to about 0.3% emulsifier [p. 19, lines 9-10].

The invention of claim 1 is further defined by the dependent claims which claim, among other things, the axial opening dimension, diameter of stator and rotor, rotational speeds of the rotor, tip speed of the rotor, throughput rates, that co-axially engageable rings of teeth of the sator and rotor are separated to define radial channels, and a

plurality of radial channels, raw ingredients in the various phases being processed, that the phases can be combined to form an emulsion containing product, a spoonable or pourable dressing made by the inventive process, that the mayonnaise and salad dressing are firm to creamy and made with less oil and emulsifying components when compared to conventional processes.

Claim 29 is dependent on claim 1 and specified that the mayonnaise and salad dressing may be free of starch. This claim is separately patentable because the primary reference specifically requires starch.

As a further illustration of advantages of the present process, the process comprising on in-line mixer/emulsifier equipped with one set of 15 inch rotor and stator having adjustable gap and variable speed motor can replace four or more of the largest colloid mills and produce the same throughput while expending only about 78 % of combined power of four mills and from about 66 % to about 76 % of the capital costs of four mills.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues raised in this appeal are primarily ones of fact and of the type normally encountered in connection with a rejection made under 35 USC §103. In particular, the issue is as follows:

(1) Would one of ordinary skill in the art, upon reading

Trainor et al., U.S. Patent No. 4,423,084 (hereinafter, Trainor '084)in view of **Ross** et al., U.S. Patent No. 5,632,596 (hereinafter, Ross '596)

find it obvious to use a superior process for making a dressing, either a mayonnaise or salad dressing which can be made in the same production line; that has a throughput rate as high as about 1,000 pounds per minute as claimed in claims 1, 3, 5, 6, 8, 9-11, 13-16, 18-26 and 28 of the present invention?

(2) Would one of ordinary skill in the art, upon reading **Akashe** et al., U.S. Patent No. 6,235,336 (hereinafter, Akashe '336) in view of **Ross** et al., U.S. Patent No. 5,632,596 (hereinafter, Ross '596) find it obvious to use a superior process for making a mayonnaise or salad dressing that is free of starch as claimed in claim 29 of the present invention?

VII. ARGUMENT

Issue 1. Claims 1, 3, 5, 6, 8, 9-11, 13-16, 18-26 and 28 Are Not Obvious Under 35 USC §103

The Examiner rejected Claims 1, 3, 5, 6, 8, 9-11, 13-16, 18-26 and 28 under 35 USC §103 as being unpatentable over Trainor, U.S. Patent No. 4,423,084 (hereinafter, Trainor '084) in view of Ross, U.S. Patent No. 5,632,596 (hereinafter, Ross '596). The Examiner maintains, in summary, that, Trainor '084 discloses a process for making a salad dressing having starch, acidulant, egg, oil, water and sweetener. The Examiner admits that, the '084 reference is silent with respect to (1) pre-mixing raw ingredients that include oil and emulsifier and (2) rotor and stator measurements, but the specific apparatus features described in Ross '596 are relied upon to cure the deficiencies of the primary reference. In view of this, the Examiner believes that the obviousness rejection is warranted.

Notwithstanding the Examiner's apparent position to the contrary, it is the Applicants' position that the presently claimed invention is patentably distinguishable from the above-described for at least the following reasons.

The present invention is directed to a process for making an emulsified dressing composition, the dressing composition being a mayonnaise or salad dressing. The process as claimed in Claim 1 includes a step (a) of forming a coarse pre-emulsion by combining an oil phase, an aqueous phase, and an emulsifier phase in a pre-mix tank. The coarse oil/water emulsion is then sent through the in-line mixer/emulsifier in a single pass to produce the desired dressing composition. Claim 1 specifies a high throughput rate of up to about 1000 pounds per minute (not achievable in colloid mills, such as those of Trainor '084). Further, independent claim 1, is directed to a process

for making a mayonnaise and/or salad dressing composition in the same production line such that a coarse emulsion is sent through an apparatus in a single pass. Only one production line is required in order to make two distinct dressing compositions.

The invention of claim 1 is further defined by the dependent claims which claim, among other things, various and unobvious process modifications which include axial opening dimensions, the diameter of the stator and rotor, the rotational speeds of the rotor, the tip speed of the rotor, the characteristics of the rings of the teeth of the stator and rotor, and the presence of radial channels on the stator and rotor. The process of claim 1 *(already requiring an oil phase and an aqueous phase)* is still further defined in that the raw ingredients can comprise an egg phase (claim 25), a starch paste phase, a sweetener phase, an acidulant phase, optional solids, or combinations thereof. Claims 25-26 define the type of *emulsifier and amounts employed.* Claim 22 describes a dressing composition made by the process of claim 1. Dependent claim 28 further defines the process of claim 1 such that the mayonnaise and salad dressing produced *in the same production line* are firm to creamy and made with less oil and less emulsifying components when compared to compositions made via conventional processes. Specifically, the process set forth in the claimed invention results in a mayonnaise or salad dressing composition that is firm to creamy in the absence of high levels of oil and emulsifying agents. Thus, good textures are achieved while reducing the amount of oil and/or emulsifying components when compared to conventional processes.

Such good textures are also achieved without utilizing starch (see Claim 29, Issue 2, below).

In contrast and as already made of record, none of the important and critical limitations set forth in the presently claimed invention are even remotely described in the Trainor '085 and Ross '596 references. The combination of references fails to disclose or suggest the unique claimed process for making dressings. Trainor '084 does not, even remotely, teach, suggest or describe any of the important and critical limitations set forth in independent claim 1. Particularly, there is no teaching whatsoever in Trainor '084 regarding making multiple products in one pass, regarding high throughput, or regarding attempts to make the process more efficient. Trainor '084 merely describes a process for making emulsified salad dressings, using a **colloid mill as critical** in the freeze-thaw stability and resistance to mechanical stress, with starch. The '084 reference does not teach, suggest, or disclose, for example, the steps of forming a premix of raw ingredients which include an oil phase and an emulsifier phase to make a coarse emulsion to be fed in a single pass to an in-line mixer/emulsifier having a specific stator and rotor arrangement as claimed. Furthermore, Trainor '084 fails to disclose or suggest texture characteristics as set forth in the presently claimed invention. Moreover, Trainor '084 cannot achieve the high throughput rates with its colloid mill, in contrast to the present invention. As stated in the Specification, it is impossible for colloid mills to achieve the same high throughputs as those of the equipment of the present invention, despite the common elements of stator and rotor.

In the Final Office Action, the Examiner states that the argument regarding Trainor not disclosing the steps of forming a premix of raw ingredients that include oil and emulsifier are not found persuasive "since the claims do not require this step." Applicants respectfully submit that the claims do require this step. Element (a) of claim 1 is directed to:

> combining raw ingredients comprising an oil phase and an aqueous phase in a pre-mix tank comprising a means for mixing to form a coarse emulsion ...

Claim 1 has a further limitation that states:

> ... the dressing being mayonnaise or a salad dressing and an oil phase and an emulsifier phase are raw ingredients combined in the pre-mix tank.

Therefore, Applicants respectfully submit that Trainor does not disclose the claimed significant steps of forming a premix of raw ingredients that include oil and emulsifier.

The deficiencies in Trainor '084 are not cured by Ross '596, since it merely discloses a rotor and stator assembly in an industrial mixer that can be used to blend various materials like adhesives, coatings, cosmetics, foods, pharmaceuticals and plastics. The combination of references does not, even remotely, suggest blending mayonnaise and/or salad dressing compositions in one pass and in the same production line. Preparing a pre-emulsion is not suggested by the references. Furthermore, the combination of references does not, even remotely, suggest that a firm to creamy mayonnaise composition and/or salad dressing composition can be made with a creamy to firm texture while at the same time having less oil and/or emulsifier than conventional products (even in the absence of starch). Furthermore, the combination of references does not contemplate all the unexpected benefits achieved by the process according to the present invention, including high throughput rates for making dressings, energy savings in making dressings, and other process efficiencies achieved with the present process compared to conventional processes that use colloid mills.

Issue 2. Claim 29 Is

Not Obvious over Akashe '336 In View of Ross '596

The Examiner rejected Claim 29 under 35 USC §103 as being unpatentable over Akashe, U.S. Patent No. 6,235,336 (hereinafter, Akashe '336) in view of Ross, U.S. Patent No. 5,632,596 (hereinafter, Ross '596). According to the Office Action, Akashe '336 disclose using salted egg yolks to make an emulsion in a device with a rotor/stator shear device; ingredients of the product are shown in the first Table in column 6. The Examiner admits that the claims differ from Akashe '336 in the specific apparatus features of the shear device. To cure the vast deficiencies of the primary reference, the Examiner relies on Ross '596. In this regard, without showing where in the references there is a suggestion or motivation to come up with the unique combination of process steps to advantageously make dressings, the Examiner maintains that the 35 USC §103 rejection is proper and should be made final.

Notwithstanding the Examiner's apparent position to the contrary, it is, again, the Appellants' position that the presently claimed invention is patentably distinguishable from the above-described for at least the following reasons.

Claim 29 is directed to a starch free mayonnaise and salad dressing. Good textures are also achieved without utilizing starch.

Nothing in the combination of Akashe '336 with Ross '596 teaches or suggests arriving at a starch free mayonnaise. Akashe '336 merely relate to one possible ingredient in a dressing composition, i.e., egg yolk. The present invention does not even call for the modified egg yolk of Akashe '336 and Applicants question its relevance

to the present invention. Ross '596 fails to cure the deficiencies of Akashe '336 in order to arrive at the subject matter of the present invention. Akashe '336 is not aimed at forming a starch-free dressing. Furthermore, there is no suggestion in Akashe '336 for combination with Ross '596, nor does that combination arrive at a starch free mayonnaise. Reversal of this rejection is respectfully requested.

There Is No Motivation to Combine the References

The Examiner has combined Akashe '336 with Ross '596 and has concluded that the claimed invention is obvious. It is clear that there is no motivation to combine the references. Some teaching, suggestion, or incentive supporting combination of multiple references must be shown in order to prove obviousness. In re Gaiger, 815 F.2d 686 (Fed. Cir. 1987); ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

An obviousness rejection is proper only when "the subject matter as a whole would have been obvious at the time the invention was made ..." (emphasis added). 35 U.S.C. 103. Applicants respectfully submit that the Office Action has improperly chosen certain aspects of Akashe '336 and combined them with aspects of Ross '596, without showing where the motivation is to combine them to come up with the subject matter of the present invention as a whole, within the meaning of 35 U.S.C. 103. Applicants submit that the pending claims are not obvious over the cited references, under 35 U.S.C. 103, especially in view of the present Amendment. Reversal of the rejection is respectfully requested.

In view of the above, it is clear that the Examiner has not established a *prima facie* case of obviousness as required under 35 USC §103. In view of this, and since all claim

limitations set forth in the presently claimed invention as now presented are not even remotely found in the combination of references relied on by the Examiner, it is respectfully requested that the rejection made under 35 USC §103 be withdrawn and rendered moot.

The combination of references does not suggest that a mayonnaise and salad dressing may be made in the same production line and do not suggest that the throughput rate is as high as 1,000 pounds per minute. The important combinationof parameters to enable efficient dressing production is not suggested by the references. In view of the above, all of the important and critical limitations set forth in the presently claimed invention are not found in the combination of references.

In view of the above, Appellants submit that a proper rejection under 35 U.S.C. 103 has not been made. Accordingly, reversal of the Final Rejection by the Honorable Board is appropriate and is courteously solicited.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (previously presented) A process for making a dressing comprising the steps of:

(a) combining raw ingredients comprising an oil phase and an aqueous phase in a pre-mix tank comprising a means for mixing to form a coarse emulsion, and

(b) processing the coarse emulsion in a single pass through an in-line mixer/emulsifier comprising at least one set of stator and rotor, and an adjustable speed motor to drive the rotor, wherein the stator and rotor comprise co-axially engageable rings of teeth having a plurality of concentric vanes and concentric wells with generally slanted side walls from each vane to each well and the rotor and stator when engaged are such that the concentric vanes of the stator align with the corresponding concentric wells of the rotor and the concentric vanes of the rotor align with the corresponding concentric wells of the stator with the corresponding generally slanted walls of the stator and rotor aligned and when engaged a gap having an axial opening dimension and slanted opening dimension is defined by each concentric vane and each concentric well and the aligned slanted walls and the gap is adjustable in increments of about 0.015 inches in axial opening dimension,

wherein said axial opening dimension is about 0.010 inches to about 0.500 inches;

wherein the diameter of the stator and rotor is about 9 inches or more;

wherein the adjustable motor operates at up to about 3,600 rpm;

said process having a throughput rate of about 100 pounds per minute to about 1,000 pounds per minute;

the dressing being mayonnaise or a salad dressing and an oil phase and an emulsifier phase are raw ingredients combined in the pre-mix tank;

further wherein the mayonnaise and salad dressing are made in the same production line; and

wherein said dressing comprises about 0.1 to about 0.3% emulsifier.

2. (canceled)

3. (original) The process of Claim 1 wherein the axial opening dimension is from about 0.030 inches to about 0.180 inches.

4. (canceled)

5. (original) The process of Claim 1 wherein the diameter of the stator and rotor is about 12 inches to about 18 inches.

6. (original) The process of Claim 1 wherein the diameter of the stator and rotor is about 12 inches to about 15 inches.

7. (canceled)

8. (original) The process of Claim 1 wherein the rotor operates at rotational speeds of about 1,500 rpm to about 8,000 rpm.

9. (original) The process of Claim 1 wherein the rotor operates at rotational speeds of about 1,900 rpm to about 5,000 rpm.

10. (original) The process of Claim 1 wherein the rotor has a tip speed of about 6,500 ft/min to about 15,000 ft/min.

11. (original) The process of Claim 1 wherein the rotor has a tip speed of about 7,125 ft/min to about 14,125 ft/min.

12. (canceled)

13. (original) The process of Claim 1 having a throughput rate of about 145 pounds per minute to about 1,000 pounds per minute.

14. (original) The process of Claim 1 having a throughput rate of about 500 pounds per minute to about 750 pounds per minute.

15. (original) The process of Claim 1 wherein the co-axially engageable rings of teeth of the stator and rotor are separated to define radial channels.

16. (original) The process of Claim 15 wherein the stator and rotor comprise a plurality of radial channels.

17. (canceled)

18. (previously presented) The process of Claim 1 wherein the raw ingredients are further comprised of a starch paste phase.

19. (previously presented) The process of Claim 1 wherein the raw ingredients are further comprised of a starch phase, a sweetener phase and an aqueous phase.

20. (previously presented) The process of Claim 1 wherein the raw ingredients are further comprised of an aqueous phase, an acidulant phase and, optionally, a solids phase.

21. (original) The process of Claim 1 wherein the raw ingredients are combined to form an emulsion containing product.

22. (original) A spoonable or pourable dressing made by the process of Claim 1.

23. (previously presented) The process of claim 1 wherein the raw ingredients are ingredients for making a mayonnaise composition comprising from about 65% to about 81% oil, or from about 19% to about 35% oil, or from about 5% to about 6% oil.

24. (previously presented) The process of claim 1 wherein the raw ingredients are ingredients for making a salad dressing comprising from about 45% to about 55% oil.

25. (previously presented) The process of claim 1 wherein the emulsifier phase comprises egg.

26. (previously presented) The process of claim 25 wherein the dressing comprises from about 2.0% to about 8.0% egg.

27. (canceled)

28. (previously presented) The process of claim 1 wherein the mayonnaise and salad dressing are firm to creamy and made with less oil and emulsifying components when compared to conventional processes.

29. (previously presented) The process of claim 1 wherein the mayonnaise and salad dressing are free of starch.

IX. EVIDENCE APPENDIX

No additional evidence had been submitted.

X. RELATED PROCEEDINGS APPENDIX

Neither the Appellants, their legal representatives nor the Assignee are aware of any proceedings relating to the present Appeal.